

**3.7.4 Advanced Energy Design Guide for Small Retail Buildings (1)****Shell**

Percent Glass	40%
Window (U-Factor)	0.38-0.69
SHGC	0.40-0.44
Wall R-Value	7.6-15.2 c.i.
Roof R-Value	
Attic	30-60
Insulation Above Deck	15-25 c.i.
Wall Material	Mass (HC > 7 Btu/ft^2)

**Lighting**

Average Power Density (W/ft.^2)	1.3
---------------------------------	-----

**System and Plant**

System and Distribution Type	
Packaged Single-Zone	
Packaged Single-Zone w/ Economizer	Cooling Capacity > 54 kBtuh
Heating Plant	
Gas Furnace(>225 kBtuh)	80% Combustion Efficiency
Cooling Plant	
Air conditioner (>135-240 kBtuh)	10.0 EER/10.4 IPLV - 11.0 EER/11.5 IPLV
Service Hot Water	
Gas Water Heater	90% Thermal Efficiency

Note(s): 1) Guide provides approximate parameters for constructing a building which is 30% more efficient than ASHRAE 90.1-1999.  
 Ranges are because of climate zone dependencies.

Source(s): ASHRAE, Advanced Energy Design Guide for Small Retail Buildings, 2004.